

Applicant: President Electronics USA FCC ID: 2AEOCPC213

**Test Report S/N:** 45461895-R1.0 **Project:** 1640

## **EXHIBIT 7 – FCC RF EXPOSURE (MPE) REPORT**

## Prediction of MPE Limit 47 CFR § 2.1091

$$S_{20} = \frac{P_A G_N}{4\pi R_{20}^2}$$

$$S_C = \frac{P_A G_N}{4\pi R_C^2}$$

$$R_{c} = \sqrt{\frac{P_{A}G_{N}}{4\pi S_{I}}}$$

$$S_L = \frac{180}{f^2} (mW/cm^2)$$

 $S_{20}$  = Power Density of the Device at 20cm

 $S_L$  = Power Density Limit

 $S_C$  = Power Density of the Device at the Compliance Distance  $R_C$ 

 $R_{20} = 20 cm$ 

R<sub>c</sub> = Minimum Distance to the Radiating Element to Meet Compliance

 $P_T$  = Power Input to Antenna

 $P_A$  = Adjust Power

 $G_N$  = Numeric Gain of the Antenna

f = Transmit Frequency

## Transmit Duty Cycle (VOX) = 75%

## **Use Group = General Popuation**

Transmit Duty Cycle:	75.00	(%)
Tx Frequency (f):	27.405	(MHz)
RF Power at Antenna Input Port ( $P_T$ ):	12000.00	(mW)
Antenna Gain:	3.00	(dBi)
Numeric Antenna Gain (G <sub>N</sub> ):	2.00	(numeric)
Cable or Other Loss:	0.00	(dB)
Duty Cycle/Loss Adjusted Power $(P_A)$ :	9000.00	(mW)

S <sub>L</sub> =	0.240	(mW/cm <sup>2</sup> )
S <sub>20</sub> at 20cm =	3.573	(mW/cm <sup>2</sup> )
R <sub>c</sub> =	77.2	(cm)
s <sub>c</sub> =	0.24	(mW/cm <sup>2</sup> )

User's Manual must indicate a minimum separation distance of:	78cm
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NOTE: The ISED MPE calculation yields a separation distance of <u>92cm</u>. The User's Manual indicates the worst-case <u>92cm</u>.